**Before the**
**Federal Communications Commission**
**Washington, D.C. 20554**

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| In the Matter of | ) | |
| Proposed Amendments to the Service Rules Governing Public Safety Narrowband Operations in the 769-775/799-805 MHz Bands | ) | PS Docket No. 13-87 |
| The Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010 | ) | WT Docket No. 96-86 |
| National Public Safety Telecommunications Council Petition for Rulemaking on Aircraft Voice Operations at 700 MHz | ) | RM-11433 |
| National Public Safety Telecommunications Council Petition for Rulemaking to Revise 700 MHz Narrowband Channel Plan | ) | RM-11433 |
| Region 24 700 MHz Regional Planning Committee Petition for Rulemaking | ) | WT Docket No. 96-86<br>PS Docket No. 06-229 |
| State of Louisiana Petition for Rulemaking | ) | RM-11577 |

# Comments of the National Regional Planning Council to the Commission's Seventh Report and Order and Notice of Proposed Rulemaking

The National Regional Planning Council (NRPC) respectfully files these comments in response to the Commission's Seventh Report and Order and Notice of Proposed Rulemaking concerning proposed changes to rules in the public safety 700 MHz band. In these comments, the NRPC provides its perspective of the issues brought forth for comments by the Commission regarding parameters associated with the use of the public safety 700 MHz band and encourages the Commission to finalize some key issues centered around the public safety 700 MHz allocation, specifically regarding the 6.25 KHz efficiency requirements and band plan adjustments resulting from the 2007 public safety 700 MHz band reconfiguration.

Subsequently, the NRPC herein provides comments on topics it believes are most pertinent and germane to the issues that can benefit public safety and are currently before many of the 700 MHz regional planning committees responsible for managing 700 MHz public safety narrowband spectrum.

## The National Regional Planning Council

The National Regional planning Council (NRPC) is an advocacy body formed in 2007 that supports public safety communications spectrum management by Regional Planning Committees (RPC) in the 700 MHz and 800 MHz NPSPAC public safety spectrum as required by the Federal Communications Commission. We liaison with FCC certified frequency coordinators, licensees, applicants, vendors, adjacent regions as well as the Commission on a regular basis to ensure our planning responsibilities and the goals of the public safety first responder agencies we serve are

met. These Regional Planning Committees are made up of public safety volunteer members that dedicate their own time and the time of their agencies, independent of their regular duties, to coordinate 700 and 800 MHz spectrum efficiently and effectively for the purpose of making it available to public safety agency applicants in their region. The work these people do every day reflects their dedication to public safety communications and to ensuring local public safety agencies and user needs are heard and met within their regions and beyond. The steps they take in the RPC process are to ensure the first responder community has the tools they need to do their job.

As a body that advocates the *voice* of regional planning committees and one that does not attempt to consolidate and centralize that voice into a single message, the NRPC encourages each region planning committee (700 and 800 MHZ) to voice their opinions and positions on topics they deem important and speak to the Commission in filings and comments as best they can with the intimate, specific knowledge they have on these issues. Their expertise is related to the regional public safety communication initiatives in place and how users are impacted within each region by the Commission's rules and process. Subsequently, the NRPC does not in this Further Notice of Proposed Rulemaking speak on behalf of each individual FCC recognized regional planning committee but rather promotes each region's ability to speak on behalf of the needs of their users.

While many RPC members were involved in the development of the current rules and policies associated with the use of 700 MHz narrowband spectrum, the NRPC is hopeful that each regional planning committee will respond to the Commission and provide comments with their

perspective on these important issues and introduce their own viewpoints for consideration. We encourage each region to do so.

## Narrowband Power Limits

The NRPC feels the FCC should augment 90.541 to include the HAAT values and antenna height limits that currently exist in 90.545. The NRPC also feels that the Commission should remove the Transmitter Power Output (TPO) values in 90.541 and replace them with the the Effective Radiated Power (ERP) values from 90.545.

The NRPC also feels strongly that power limits in the Commissions rules whenever possible should be reflected in Effective Radiated Power (ERP) rather than Transmitter Power Output (TPO) as ERP values provide a clearer picture of the use of any spectrum configuration.

Furthermore, the NRPC feels that the Commission should remove 90.545 from its rules in its entirety as the finalization of the DTV transition has left no need for established protection criteria for full power TV and DTV television stations in the 700 MHz band.

## Interoperability Network Access Code

The NRPC feels the Commission should promote Best Practices in the implementation of interoperable assets by public safety. The use of $293 was established in practice in many areas of the public safety community as the Network Access Code (NAC) for the 700 MHz Interoperability Spectrum within the National Coordination Committee (NCC) as early as 2001 in areas of the country where the 700 MHz spectrum (in part or in whole) was available to public safety. While the Commission had identified a number of states that have elected to administer

the 700 MHz interoperability spectrum for use within their state by their Statewide Interoperability Executive Committee (SIEC), none of these states have been required in the Commission's rules to provide a written plan that documents or outlines the results of that administration or agreed upon use of the 700 MHz Interoperability Channels. Subsequently, determining which NAC code has been established for the use of 700 MHz Interoperability spectrum in each state is difficult. While there may be some consistency between NAC codes implemented for use with this spectrum within each state, there may not be consistencies between state users and in areas large metropolitan areas which lie at multiple state borders.

The NRPC urges the Commission to either recommend or require/establish a Project 25 Network Access Code for the use of 700 MHz interoperability spectrum. We think it is more important for the Commission to establish a common NAC code for 700 MHz interoperability spectrum. While $293 has been established for some time in certain areas as the default value, we believe the Commission should determine a standard code for nationwide use of this spectrum resource.

Further, we feel this determination is particularly important as mobile/portable use of this spectrum is "licensed by rule" (90.525)(a) and it is more difficult for users to determine which agencies utilize this spectrum in their mobile/portable radios in adjacent states under 90.525 (a). Due to this unique licensing arrangement, we feel it particularly necessary to ensure that a standard NAC code is utilized for the use of this spectrum.

Finally, we urge the Commission to require from each state that has committed to administer the 700 MHz interoperability spectrum a plan that is to be updated annually documenting the parameters and variables they implement when utilizing these nationwide, common public safety spectrum resources. These documents that outline the requirements identified by each state will be valuable for use of 700 MHz interoperable spectrum used, particular in inter-state response.

Having the ability to know how a state implements its 700 MHz interoperability spectrum can improve interoperable communications and allow the spectrum resource to be more effective in public safety response.

## User Access to Interoperability Channels

The NRPC feels that, in the Commission's interpretation of 90.547(a), it is sufficient to allow 700 MHz mobile and portable radios to be only *capable* of being programmed to operate on any of the 700 MHz designated interoperability channels as needed. Some states have identified that, due to the capacity of radios in the field that only a portion of 700 MHz interoperability channels are required to be programmed in any 700 MHz radio. In this case, a state's administration of the 700 MHz interoperability spectrum may not require all of the channels to be programmed into each radio. The NRPC feels that each radio's should have the ability to program any 700 MHz interoperability channel, but should not be required to carry all of the channels in order to meet the Commission's rules.

## Analog Operation on the Interoperability Channels

The NRPC feels strongly that allowing analog operation on the designated 700 MHz interoperability spectrum is not consistent with National Coordination Committee recommendations not is it consistent with the anticipated use of interoperability spectrum by public safety since the creation of the 700 MHz band. 700 MHz was proposed as a digital band to be utilized by public safety due to a number of benefits resulting from digital radio technologies including voice quality, spectrum efficiency and the consistent implementation of the Project 25 standard for use in the implementation of the 700 MHz interoperability spectrum.

To utilize analog technologies with 700 MHz interoperability channels would be a step backwards in current interoperable communications and would hamper future expectations and assumptions of users responding to multi-agency incidents expecting common use of the 700 MHZ interoperability channels.

The NRPC's interpretation of 90.535(a) has been that "mobile and portable transmitters may be capable of operating using analog modulation as a secondary mode of operation" infers that the Commission acknowledged at the time of rulemaking, and were correct in doing so, that 700 MHz spectrum would be utilized in mobile and portable public safety devices that also utilized the 800 MHz band. Today, all commercially available mobile and portable subscriber units available to public safety operate in the public safety 700 and 800 MHz bands. Further, the Commission's rules on the use of the public safety 800 MHz band permits analog emissions in the band which is consistent with 90.535(a). The NRPC feels strongly that 90.535(a) should not be interpreted to consider analog operation on the 700 MHz interoperability spectrum but that 90.535(a) should represent the Commission's acknowledgement that in mobile and portable radios that utilize 700 MHZ interoperability spectrum, which utilizes exclusively the Project 25 Standard Common Air Interface (CAI), there can exist a secondary, analog mode that allows for analog operation in the 800 MHz band, consistent with the Commission's rules.

Additionally, in no way do we see 90.535(a) establishing or promoting any correlation between the ability to have a secondary analog mode of operation in a device that utilizes 700 MHz interoperability spectrum and that analog mode being considered an acceptable mode of operation for use of 700 MHz interoperability spectrum, which would be inconsistent with Project 25 CAI requirements currently in the Commission's rules for 700 MHz interoperability. Should analog operation be permitted by the Commission on the 700 MHz interoperability

channels, the NRPC feels that would be a step backwards in the current 700 MHz public safety interoperable usage environment and would inject uncertainty in the capabilities and tools used by first responders nationwide.

Lastly, the Commission's rules currently permit analog operation on designated public safety 700 MHz low power spectrum on a nationwide itinerant basis as well as on a regional basis. Analog operation is permitted on these designated channels and these channels were designated for that specific purpose in the Commission's rules and as a result of the work of the National Coordination Committee.

## 2010 NPSTC Petition – Air-Ground Communications on Secondary Trunking Channels

The NRPC concurs with the NPSTC Petition to permit 700 MHz Secondary Trunked channels for Air to Ground communications and for the Commission to designate these channels for air to ground coordinated operations on a nationwide basis. The initial designation of Secondary Trunked channels in the 700 MHz band anticipated secondary trunked operation to be considerable in systems where trunked operations utilized interoperability channels until the channels were needed for conventional 700 MHz interoperability. The intended use of these channels during the NCC and current use nationwide indicates that perhaps these channels would have been better designated for other purposes within the NCC process and the needs of public safety have indicated that assigning these resources to this purpose will serve the needs of the users.

Air to ground operations utilizing particular 700 MHz channels designated for this purpose will allow the use of these channels to be used conventionally to promote communications between users on the ground and those operating aircraft. Conventional use of these channels, including

simplex operation on the base of each transmit pairing, would be an effective use of these channels.

The Commission seeks comment on who should coordinate the use of any Secondary Trunked 700 MHz channels designated for air to ground use. Today, 700 MHz spectrum management is tasked to a number of disparate entities including each 700 MHz Regional Planning Committee (General Use Spectrum), 700 MHz State Licensee's (State License Geographic Spectrum), and Statewide Interoperability Executive Committee's or their equivalent (700 MHz Interoperability Spectrum). The NRPC feels strongly that the Regional Planning Committee(s), with the ability to document use of specific air to ground use of 700 MHz Secondary Trunked channels in the CAPRAD database, are the best candidates to effectively coordinate this spectrum. RPC's have the ability to identify and work with potential applicants of Secondary Trunked channels, many of whom will already be utilizing the 700 MHz band in their current operations.

Additionally, the NRPC feels that power limitations for the use of 700 MHz Secondary Trunked spectrum should be established with minimum power levels necessary to achieve the communications necessary with power levels be tied to reasonable altitude restrictions.

# 2008 NPSTC Petition – Proposed Revisions to 700 MHz Narrowband Channel Plan

The NRPC generally supports the NPSTC Petition that reflects the disparity between how the 700 MHz narrowband spectrum was originally proposed in the midst of the DTV transition and the needs of public safety users a decade after the implementation of the original rules. Most of the proposed revisions will inject practical solutions to regulatory inefficiencies currently in place in the Commission's rules for 700 MHz narrowband portion of the spectrum.

## Nationwide Interoperability Travel Channel

Consistent with the current 700 MHz band plan, the NRPC supports the continued use of 39/999-40/1000 as a Nationwide Interoperability Calling Channel as proposed in the NPSTC proposal. We also support the re-designation of 700 MHz narrowband channel 681/1641-682/1642 to serve as a Nationwide Interoperability Travel Channel. This Nationwide Interoperability Travel Channel should serve all users as a resource to support the logistics and transport of communications resources, equipment and personnel in emergency response situations. The ability for users and incident commanders at an incident scene to have access to a resource specifically dedicated to and use by those bring additional resources to mission critical incidents can be extremely beneficial.

With regard to Canadian cross border viability of the two (2) current Interoperability Calling Channels and the re-designation of one of the channels to a Nationwide Travel channel, the cross border viability currently in place can remain under the new travel channel designation. The retention of this international capability would be predicated on the state administering the 700 MHz channels along the Canadian border ensuring that the new travel channel designation and

protocol was shared with Canadian authorities by distributing the 700 MHZ Interoperability Plan for their respective state.

## Tactical Voice Communications on Data Interoperability Channels

The NRPC feels that the designation of data interoperability channels does not utilize most effectively the designated interoperability spectrum. This spectrum would be utilized efficiently if the entity administering the interoperability channels in each state issued a plan outlining the use of the interoperability spectrum in the 700 MHz public safety band allowing the channels to be best applied to the applications required by the first responder community in that state.

The NRPC supports the flexible implementation of 700 MHz interoperability channels as needed within each state. We also support the Commission requiring each state to document its plan that outlines the manner in which they administer the 700 MHz interoperability channels.

## Reserve Channels

The NRPC supports making the most effective use of the 700 MHz narrowband reserve channels. We concur with the NPSTC approach that this spectrum be assigned to deployable mobile trunked infrastructure that would be transported into an area to assist with emergency response based on established FEMA regions. Having specific 700 MHz channels designated for deployment to specific areas allows for planning by local agencies and their users in anticipation of the resource that will be delivered in times of need. Agencies can pre-program the appropriate frequencies into their subscriber equipment to have the frequencies available when needed.

However, while spectrum availability and access is important during response to mission critical incidents, the NRPC feels strongly that the use of Reserve Channels can also have beneficial use

when used on a day to day basis. LA RICS request to utilize the 700 MHz Reserve Channels under the authority of the Region 5 700 MHz Regional Planning Committee is an example of a scenario where a number of agencies have a dire need for the use of the spectrum on a day to day basis.

This request is an excellent example of the principle that in such circumstances, the guidelines for the use of the spectrum should not be so restrictive that the planned use of a temporary spectrum asset supersedes the need for agency(s) that could benefit from utilizing the spectrum resource on a day to day basis. In the case of LA RICS request to utilize 700 MHz Narrowband Reserve Channels, neither the planned deployable use of the spectrum nor LA RICS day to day use is more important to public safety than the other as they both have their pertinent applications but the benefit to public safety from both applications should be considered and respected by all users. In their implementation of these channels, LA RICS can still acknowledge the planned deployable use and implement the channels in their system while acknowledging the mission of the spectrum utilizes as deployable, transportable assets.

The NRPC supports a flexible approach for the use of the Reserve Spectrum under the management of the Regional Planning Committee in each RPC region. The NRPC also feels that Reserve Spectrum may be candidate spectrum, in part or in total, for the dedicated use of low power Vehicular Repeater operation (MO3) as coordinated by regional planning committees. With 700 MHz narrowband spectrum available nationwide for *specific* low power applications such as Vehicular Repeaters, proper frequency coordination by each regional planning committee of a relatively small number of disparate 700 Reserve channel pair could ensure result in optimum performance and optimum reuse of the 700 MHz narrowband resource. The NRPC feels this application is valid and an application worth dedicating spectrum to. The operation of

assigned vehicular repeater frequencies nationwide could also be dedicated to 700 MHz narrowband Secondary Trunked Spectrum on a nationwide basis.

In conclusion, if the Commission was able to dedicate a portion of either the Reserve or Secondary Trunked portion of the 700 MHz narrowband spectrum band for the exclusive operation of vehicular repeater operations at 2 watts ERP, a handful of 12.5 KHz channels nationwide would be dedicated to this application and can assist in meeting this ongoing need for public safety responders.

## Power Limit for Low Power Channels

The NRPC supports an increase in the 2 watt power limits for the Low power analog eligible 700 MHz channels subject to regional planning (Channels 1-8 paired with 961-968 and 949-958 paired with channels 1909-1918) but not for the Nationwide Itinerant Operations Low power channels (Channel 9-12 paired with 969-972 and 959-960 paired with 1919-1920).

Absent any formal coordination or acknowledgement of use, the NRPC feels the Itinerant Low Power channels are just as effective at 2 watts ERP as they would be at any higher power level. Subsequently, we feel it appropriate for the Commission to retain the 2 watt ERP power limit for the 700 MHz Low Power Nationwide Itinerant channels listed above.

The NRPC supports an increase up to 20 watts ERP for the 700 MHz Low Power channels subject to regional coordination. With such an increase in the Commission's rules, the regional coordination inherent in the RPC process on an agency by agency use basis will allow the channels to be coordinated at power levels *up to* 20 watts ERP acknowledging other use in the region. The RPC and the applicant can work together to coordinate the channels to the power levels necessary up to 20 watts ERP based on the specific application. The NRPC also

recommends that fixed use of any 700 MHz Low Power analog eligible channels (subject to regional coordination or nationwide itinerant) adhere to the Commission's 6 Meter (20 ft) Above Ground Level (AGL) rule to ensure the public safety application of these channels meets the applicants needs without negatively impacting other agencies use of these common channels.

## Project 25 Compliance Assessment Program

The NRPC feels the Commission should require that all 700 MHz narrowband equipment be Project 25 CAP certified prior to being available for marketing or sale to 700 MHz licensees. The Project 25 CAP program has had a positive impact on interoperable communications and compatibility of equipment since its inception and further requirements will continue to ensure that Project 25 equipment from each vendor will have a degree of compatibility with other equipment procured in the market.

# NOTICE OF PROPOSED RULEMAKING

## December 31, 2016 Deadline for Narrowbanding Transition to 6.25 Kilohertz Bandwidth Technology

The NRPC strongly feels that the Commission should remove entirely the December 31, 2016 narrow banding deadline for 700 MHz narrowband licensees and that the elimination of 6.25 KHz (or equivalency) per voice path requirements will further interoperability efforts across the nation while allowing areas that feel they need to seek such efficiencies the ability to do so to meet their user needs.

The NRPC supports the 700 and 800 MHz regional planning communities in all 55 FC designated regions. RPC's work on a daily basis with their applicants to ensure that the operational needs of their users are met while ensuring that their use of public safety 700 and 800 MHz NPSPAC spectrum does not negatively impact other nearby users. The NRPC and its member regions have filed numerous comments with the Commission in several proceedings acknowledging spectrum efficiency in the 700 MHZ band and acknowledging that future flexible use of the spectrum may introduce efficiencies beyond the 6.25 KHz January 1, 2017 spectrum efficiencies outlined in the Commission's rules. Since the 700 MHz public safety band has become available across the US after the completion of the DTV transition, building digital wide area systems in the 700 MHz band has been considered by many applicants.

Since the completion of the DTV transition in 2009, many regional planning committees have seen applicants seek spectrum for their wide area systems in the 800 MHz band due to the 6.25 KHz per voice path requirement inherent today in the 700 MHz public safety spectrum. In

public safety radio system procurement, the cost of subscriber units (mobile and portable radios) can often exceed the cost of fixed infrastructure in the same system. Generally speaking, 700 MHz fixed infrastructure and subscriber units capable of currently operating in or being capable of being upgraded to Time Division Multiple Access (TDMA) technologies, necessary to meet Project 25 Phase 2 requirements that also meet the Commission's 6.25 KHz efficiency requirement, have not been available in the public safety marketplace for an amount of time sufficient to reflect a substantial portion of the current subscriber base of agencies/applicants either currently utilizing 700 MHZ spectrum or seeking to build systems in the 700 MHz band. The 6.25 KHz per voice path efficiency date of December 31, 2016 in the Commission's rules, and the concern for some agencies that such a deadline will require a complete replacement of their infrastructure in a sense, has most definitely introduced a hesitance by some applicants to implement their systems in the public safety 700 MHz band. In addition, this uncertainty has become particularly problematic in many areas that are currently limited in their access to public safety 800 MHz NPSPAC spectrum due to not having completed their 800 MHz rebanding so while public safety has sufficient land mobile radio allocations dedicated to it by the Commission in the 700 and 800 MHz band, several regulatory, technology or fiscal issues currently in place can impede a public safety agency's access to sufficient spectrum in which to build their radio systems in.

The NRPC feels that Regional Planning Committees, charged by the Commission with identifying efficient use of 700 MHz public safety spectrum and ensuring applicants have access to sufficient spectrum to meet their user needs, will work with their applicants on a case by case basis to ensure the spectrum selected and the technology implemented in each application will be appropriate for the applicant and other users in the region as well as adjacent regions. The

NRPC is confident that 6.25 KHz efficiencies will be met in areas where spectrum efficiencies, based on user needs, require it.

Public safety broadband may also someday be utilized in the current public safety 700 MHz spectrum and its use in broadband applications could lead to efficiencies than those currently in the Commission's rules for the 700 MHz Narrowband spectrum. In other proceedings the Commission has inquired and sought comment as to the viability of 700 MHz narrowband spectrum being used in a flexible manner to meet anticipated and future public safety broadband needs. The NRPC responded to those inquiries indicating that such flexible use may indeed be an option for use in support of public safety broadband application at some point in the future. Given that many current NRPC members and RPC representatives were involved in the National Coordination Committee (NCC), charged by the Commission to identify rules and guidelines for use of 700 MHz public safety spectrum 10 years ago, it is evident to many that a decade of technological advancements and the capabilities technology can introduce can change the way we envision a number of current capabilities. Some anticipated public safety applications and technologies did not even survive the duration of the DTV transition before public safety determined that technological advancements had afforded them more beneficial use of their dedicated 700 MHz spectrum. We are confident that these same technological advancements could very well allow public safety to in the future to repurpose public safety spectrum, in whole or in part, in support of public safety broadband.

In light of these observations, the NRPC supports the elimination of the 6.25 KHz per voice path efficiencies in the Commission's rules (90.535)(d)(2) and is confident the future development of

the 700 MHz public safety band will continue efficiently with a focus on meeting user needs. Should the Commission feel strongly that a date be in place to ensure that such efficiencies are achieved, we support the December 31, 2024 previously identified by parties as a date that is reasonable, would not hinder current interoperability and a deadline with a financial cost that would be consistent with the return to the public safety applicant and licensee in performance, capacity and interoperability.

The NRPC thanks the Commission for the opportunity to file comments in this proceeding. We look forward to a continued dialogue on this important public safety topic.

Regards,

**William Carter, Chairperson**

**National Regional Planning Council**

**June 18, 2013**